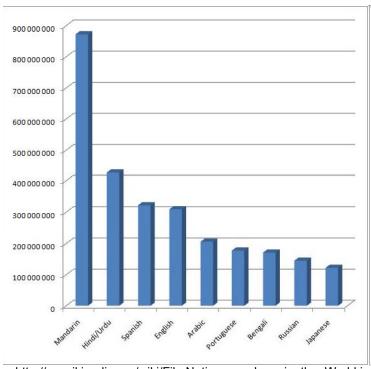
### **Introduction to Chinese Writing**

Saturday, November 17, 2012 MIT Room 16-644 • 4pm-6pm

**Stephen M. Hou** stephenhou@alum.mit.edu

Splash 2012 Educational Studies Program Massachusetts Institute of Technology

#### **How Many People Speak Chinese?**



http://en.wikipedia.org/wiki/File:Native\_speakers\_in\_the\_World.jpg Splash 2012 - Chinese Writing - S.M. Hou

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#### **Sample Chinese Writing**

 One-minute exercise: What are some distinguishing characteristics you observe with Chinese writing?

我聯合國人民同茲決心,欲免後世再遭今代人類兩度身歷慘不堪言之戰禍,重申基本人權、人格尊嚴與價值、以及男女與大小各國平等權利之信念…

WE THE PEOPLE OF THE UNITED NATIONS DETERMINED to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to regain faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small...

Preamble to the UN Charter

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#### **Sample Chinese Writing**

• **One-minute exercise:** What are some distinguishing characteristics you observe with Chinese writing?

我聯	合	國	人	民	同	茲	決	ジ	<b>,</b>	欲	免	後	世
再遭	今	代	人	類	兩	度	身	歷	慘	不	堪	叫	之
戰福	j,	重	申	基	本	人	權	`	人	格	尊	嚴	與
價值	- `	以	及	男	女	與	大	小	各	國	平	等	權
利之	信	念	• • •										

WE THE PEOPLE OF THE UNITED NATIONS DETERMINED to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to regain faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small...

Preamble to the UN Charter

#### **Chinese is an Analytic Language**

One character = One morpheme (Smallest linguistic unit with semantic meaning)

All characters are one syllable long\*

他不讓我用你的電腦 tā bú ràng wǒ yòng nǐ de diàn nǎo He (negative) allow me use you (possessive) electronic brain He (negative) allow me use your computer

\* Only true in Chinese dialects and Korean. Not the case in Japanese.

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#### **Pronouns**

- Subject and object are the same
- Genders different in written but same in spoken form

	Siı	ngular	Plural		
	Sub/Obj	Possessive	Sub/Obj	Possessive	
1 <sup>st</sup> P	我 wǒ (I, me)				
2 <sup>nd</sup> P (Male)	你 nǐ (you)				
2 <sup>nd</sup> P (Female)	妳 nǐ (you)				
3 <sup>rd</sup> P (Male)	他 tā (he, him)				
3 <sup>rd</sup> P (Female)	她 tā (she, her)				

<sup>&</sup>quot;He doesn't allow me to use your computer."

#### **Pronouns**

• Add 們 (mén) to make it plural

	Siı	ngular	F	Plural
	Sub/Obj	Possessive	Sub/Obj	Possessive
1 <sup>st</sup> P	我 wǒ (I, me)		我們 wŏ-mén (we, us)	
2 <sup>nd</sup> P (Male)	你 nǐ (you)		你們 nǐ-mén (you)	
2 <sup>nd</sup> P (Female)	妳 nǐ (you)		妳們 nǐ-mén (you)	
3 <sup>rd</sup> P (Male)	他 tā (he, him)		他們 tā-mén (they, them)	
3 <sup>rd</sup> P (Female)	她 tā (she, her)		她們 tā-mén (they, them)	

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#### **Pronouns**

- Add 們 (mén) to make it plural
- Add 的 (de) to make it possessive

	Si	ngular	Plural	
	Sub/Obj	Possessive	Sub/Obj	Possessive
1 <sup>st</sup> P	我 wǒ	我的 wŏ-de	我們 wŏ-mén	我們的 wŏ-mén-de
	(I, me)	(my, mine)	(we, us)	(our, ours)
2 <sup>nd</sup> P	你 nǐ	你的 nǐ-de	你們 nǐ-mén	你們的 nǐ-mén-de
(Male)	(you)	(your, yours)	(you)	(your, yours)
2 <sup>nd</sup> P	妳 nǐ	妳的 nǐ-de	妳們 nǐ-mén	妳們的 nǐ-mén-de
(Female)	(you)	(your, yours)	(you)	(your, yours)
3 <sup>rd</sup> P	他 tā	他的 tā-de	他們 tā-mén	他們的 tā-mén-de
(Male)	(he, him)	(his)	(they, them)	(their, theirs)
3 <sup>rd</sup> P	她 tā	她的 tā-de	她們 tā-mén	她們的 tā-mén-de
(Female)	(she, her)	(her, hers)	(they, them)	(their, theirs)

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#### **Characters and Words**

- "Word"/phrase: 詞 (cí)
- In Modern Chinese, most "words" consist of two characters.

銀行 bank 肯定 to affirm 電梯 elevator 退休 to retire 滑雪 skiing 好笑 funny 小吃 snack 可愛 cute

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#### **How Many Characters Are There?**

- Kangxi Dictionary (康熙字 典) (A.D. 1716) lists 47,000 characters.
- One needs to know ~3,000 characters to read a modern newspaper fluently.
- Shih-Kun Huang (1994) analyzed Internet postings (Traditional); Jun Da (2004) analyzed web publications, including online works from before 1911 (Simplified). Frequency results are shown.

Characters	Huang (1994)	Da (2004)
Top 250	64.4%	57.1%
Top 500	79.2%	72.1%
Top 1000	91.1%	86.2%
Top 1500	95.7%	92.4%
Top 2000	97.9%	95.6%
Top 3000	99.4%	98.3%

#### The Ideographic Myth

"Chinese characters represent ideas using pictures."

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#### **Category 1: Pictograms**

~600 characters are pictograms (象形 *xiàng xíng* "form imitation"); based on drawings of their meaning.

English	1400 B.C 1050 B.C.	500 B.C. – 200 B.C.	200 B.C. – A.D. 400.	A.D. 200 - Present
Sun, Day	0	Ð	日	日
Moon, Month	>	Ŷ	月	月
Mountain	W	W	山	山
Rain	111	雨	雨	雨

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#### **Guess the Character: Pictograms**

Can you guess the meaning of these characters?

English	1400 B.C. – 1050 B.C.	500 B.C. – 200 B.C.	200 B.C. – A.D. 400.	A.D. 200 - Present
			目	目
			馬	馬
			鳥	鳥

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#### **Guess the Character: Pictograms**

Can you guess the meaning of these characters?

English	1400 B.C. – 1050 B.C.	500 B.C. – 200 B.C.	200 B.C. – A.D. 400.	A.D. 200 – Present
		₽	目	目
		易	馬	馬
		Ž	鳥	鳥

#### **Guess the Character: Pictograms**

Can you guess the meaning of these characters?

English	1400 B.C. – 1050 B.C.	500 B.C. – 200 B.C.	200 B.C. – A.D. 400.	A.D. 200 – Present
	Ø	₽	目	目
	En P	易	馬	馬
			鳥	鳥

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#### **Guess the Character: Pictograms**

Can you guess the meaning of these characters?

English	1400 B.C 1050 B.C.	500 B.C. – 200 B.C.	200 B.C. – A.D. 400.	A.D. 200 – Present
Eye	Ø	₽	目	目
Horse	En P	易	馬	馬
Bird	SIME	M	鳥	鳥

#### **Modern Calligraphic Styles**

Examples for "horse"

# 界馬3馬馬

Semi-cursive Regular Seal Clerical Cursive Script Script Script Script Script (楷書) (篆書) (隸書) (草書) (行書) c. A.D. 200 221 B.C. 206 B.C. 206 B.C. A.D. 1st Century Oin Han Han Han Han Dynasty Dynasty Dynasty Dynasty Dynasty

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#### **Modern Typefaces**

麻省理工學院 Kaiti (楷體) "regular" 廊省理工學院 Song/Ming (宋體/明體)

麻省理工學院 Heiti (黑體)

- Kaiti typeface is considered "true script" and thus is the basis for handwriting. Appears on formal documents.
- Song/Ming is the most common printed typeface in both Chinese and Japanese; analogous to Times New Roman in English. Appears in books, magazines, and newspapers.
- Heiti is analogous to sans-serif fonts in English (e.g. Arial).
   Appears on signs, websites, computer apps (e.g. karaoke).

#### **Computer Fonts and Handwriting**

• Be careful about fonts when learning how to write Chinese! **Only Kaiti** (楷體) is the basis for handwriting.

Arial:

a

g

Q

Times New Roman:

a

g

Q

• Kaiti:

令

所

說

Song/Ming:

台

所

記

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#### **Category 2: Simple Ideograms**

Express abstract ideas

One

\_

Two

\_

Three

三

Up

上

Down

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### **Guess the Character: Simple Ideograms**

If 凹 (āo) means "concave, dented, indentation", what do you think 凸 (tū) means?

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#### **Category 3: Ideogrammic Compounds**

Two or more ideograms are combined to form a new meaning

$$£ + 火 = 秋$$
 grain fire = autumn

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### **Guess the Character: Ideogrammic Compounds**

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#### **Category 4: Rebus (Phonetic Loan)**

Characters are borrowed to mean a similar-sounding word (cf. Egyptian and Sumerian), but sometimes, the secondary meaning would dominate, so the first meaning would develop a new character to reduce ambiguity.

Character	Original meaning	Secondary meaning	New char. for original meaning
北	<i>bèi</i> "back"	<i>běi</i> "north"	书
要	<i>yāo</i> "waist"	<i>yào</i> "to want"	腰
永	<i>yŏng</i> "to swim"	<i>yŏng</i> "forever"	泳

#### **The Universality Myth**

"Chinese from thousands of years ago is immediately readable by any literate Chinese today."

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#### **Radicals**

- All characters are classified into radicals, or, bushou (部首).
- Modern Chinese dictionaries use 214 radicals as section headers to organize characters.
- Some radicals are always on the left (see the red section), but others are on the top, right, or bottom. It might even be the character itself.

#### Category 5: Radical-Phonetic Compounds

- The most common type of character (90%).
- The radical supplies meaning, the rest of the character indicates the (approximate) pronunciation.

Radical	Phonetic			
	考 kǎo "to test" (irrelevant)	旱 hàn "drought" (irrelevant)		
火	烤 kǎo	焊 hàn		
"fire"	"to roast/bake"	"to weld/solder"		
才	拷 kǎo	捍 hàn		
"hand"	"to beat/torture"	"to defend"		

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#### Category 5: Radical-Phonetic Compounds

Basic phonetic: 僉 qiān

Based on Old Chinese pronunciation, not Modern Chinese.

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### **Example of Character Creation: Chemical Elements**

- Characters for chemical elements discovered in modern times are the last officially created and recognized characters in Chinese.
- Four radicals are used to indicate state at standard temperature and pressure

```
- 金 ("gold") for solid metals
```

- 石 ("stone") for solid non-metals
- 水 / 氵 ("water") for liquids
- 气 ("air") for gases

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### **Example of Character Creation: Chemical Elements**

Based on European pronunciation:

- ●金+里(lǐ)=鋰(lǐ) lithium
- ●石+典(diǎn) =碘(diǎn) iodine
- 气 + 亥 (hài) = 氦 (hài) **he**lium

### **Example of Character Creation: Chemical Elements**

Based on meaning:

- ; + 臭 (stinky) = 溴 bromine (*brómos* in Greek also means "stench")
- 气 + 羊, short for 養 (to nourish) = 氧 oxygen

However, since francium and the transuranium elements were discovered after 1949, they have different names in Mainland China and in Taiwan.

Who decides what is a "real" character?

State Language and Letters Committee, PRC (Mainland) National Languages Committee, ROC (Taiwan)

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#### **Homophones**

- English has some (there/their/they're, pale/pail, etc), but Chinese has A LOT.
- The following characters are all pronounced "yáng":

<b>\</b>	
羊	sheep
洋	ocean, foreign
陽	masculine, yang (as in yin-yang)
楊	poplar tree (a common Chinese surname)
揚	to acclaim, to propagate

#### Language vs. Dialect vs. Accent

- **Dialect:** A variety of a language with its distinguishing vocabulary, grammar, and pronunciation.
- Accent: Speaking another language/dialect with the sound system of your own language/dialect (e.g. foreigners), or two people speaking the same native language but with different pronunciations (e.g. A Briton, an American, and an Australian reading aloud the same English sentence).
- Dialect continuum: A understands B, B understands C, C understands D, but D doesn't understand A.
- Language vs. dialect is sometimes largely determined by politics, not linguistics:

"A language is a dialect with an army and navy." (Danish/Norwegian/Swedish vs. Chinese)

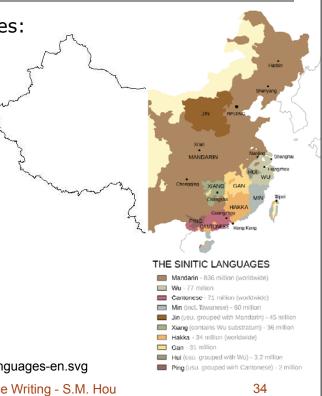
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#### **Chinese Dialects**

- Top 4 Chinese dialect families:
  - Mandarin (836 million)
  - Wu (e.g. Shanghainese) 77 million
  - Yue (e.g. Cantonese)71 million
  - Min (e.g. Taiwanese)60 million
- Not mutually intelligible.
- Dialect # Accent!

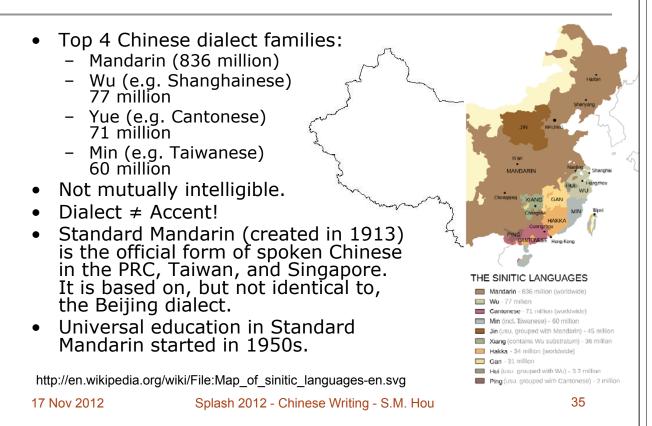


http://en.wikipedia.org/wiki/File:Map\_of\_sinitic\_languages-en.svg

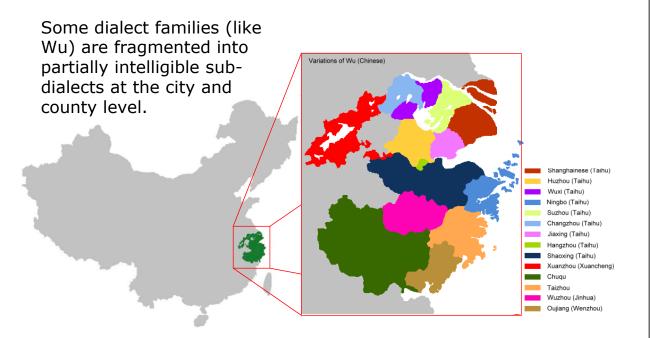
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#### **Chinese Dialects**



#### **Fragmentation within Dialect Families**



http://en.wikipedia.org/wiki/Wu\_Chinese

#### **Variation in Pronunciation**

	English	Chinese Dialects			
Char.	English Meaning	Mandarin (Standard)	Wu (Shanghai)	Yue (Cantonese)	Min (Taiwan)
學	to learn	xue	0	hok	hak
劍	sword	jian	ji	gim	kiam
無	lack, nothing	wu	me	mo	bo

Similar to the Arabic symbol "2" being pronounced "two", "dos", "deux", "zwei" in various languages, but having the same meaning in each.

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#### **How Similar?**

- Lexical similarity: Percent of standard corresponding words that sound similar.
- European languages:

French-Spanish: 75%English-German: 60%English-French: 27%

 Lexical similarity with Standard Mandarin:

- Shanghainese: 31%

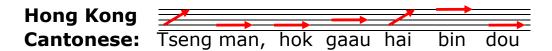
- Cantonese: 19%

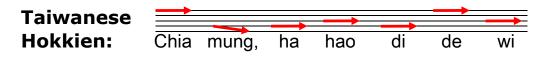
Xiamen (a prestige dialect of Min Chinese):
 15%

#### **Sample Sentence in Various Dialects**

#### 請問,學校在哪裡?





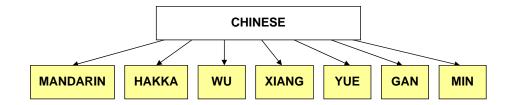


**English:** Please ask, school is at where "May I ask, where is the school?"

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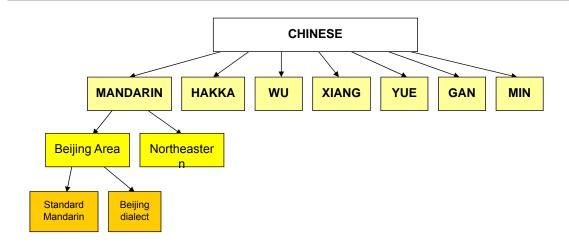
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#### (Incomplete\*) Tree of Chinese Dialects



<sup>\*</sup> Each node produces several branches. By the lowest level, there are hundreds of dialects.

#### (Incomplete\*) Tree of Chinese Dialects

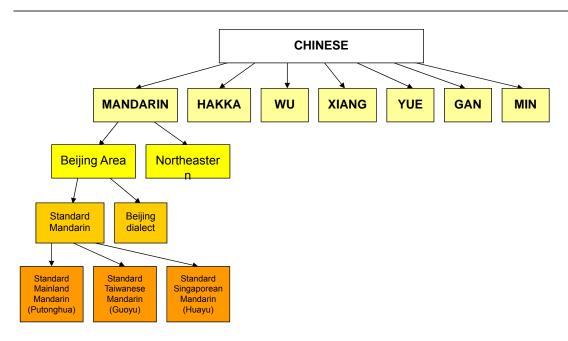


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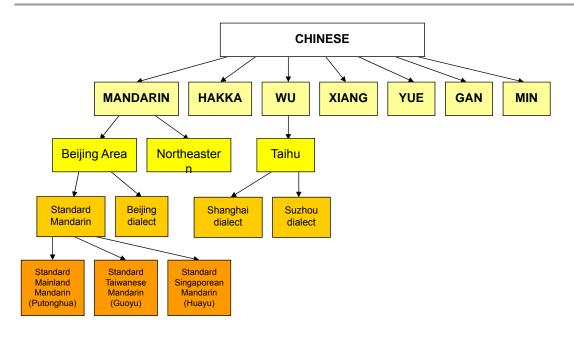
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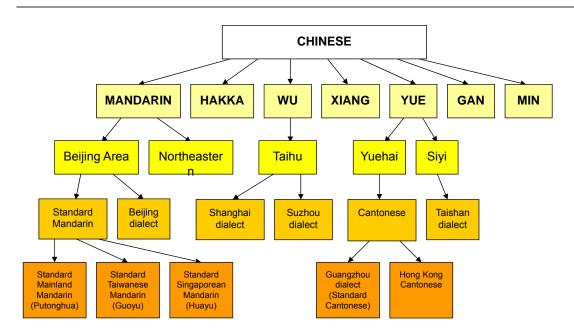
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#### (Incomplete\*) Tree of Chinese Dialects



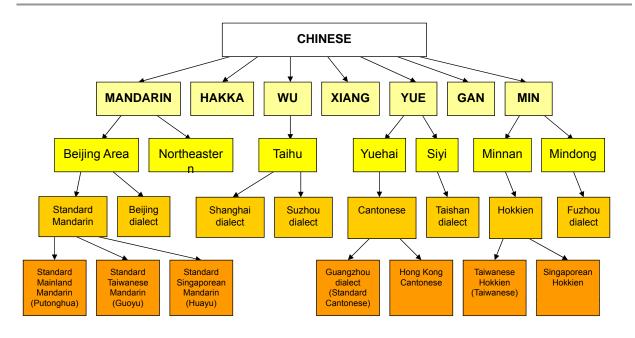
<sup>\*</sup> Each node produces several branches. By the lowest level, there are hundreds of dialects.

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#### (Incomplete\*) Tree of Chinese Dialects



<sup>\*</sup> Each node produces several branches. By the lowest level, there are hundreds of dialects.

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#### **Foreign Names and Places**

Sometimes, pick characters that mean appropriate things.

English	<b>Chinese Characters</b>	Mandarin	Meaning
Japan	日本	rì běn	"sun origin", i.e. "land of the rising sun"
Iceland	冰島	bīng dǎo	"ice island"

#### **Foreign Names and Places**

Sometimes, pick characters that sound like the native name, regardless of the characters' meanings.

English	Chinese	Pronunciation		
Eligiisii	Characters	Mandarin	Cantonese	
Canada	加拿大	jia na da	ka na daai	
Sweden	瑞典	rui dian	seui din	
Hawaii	夏威夷	xia wei yi	ha wai yi	
Greece	希臘	xi la	hei laap	

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#### **Foreign Names and Places**

English	Chinese	Mandarin	Meaning
England	英國	yīng guó	"heroic country"
USA	美國	měi guó	"beautiful country"
Germany	德國	dé guó	"virtuous country"

#### Japanese, Korean, and Vietnamese

- JKV are **linguistically unrelated** to Chinese (different language families).
- Classical Chinese had been the *lingua* franca in East Asia for thousands of years until the early 20<sup>th</sup> century.
- Thousands of Chinese words were added to JKV (hence, "Sinoxenic vocabulary"), much like Latin and Greek entered modern English, even though English is a Germanic language.

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#### Japanese, Korean, and Vietnamese

- JKV have "two levels" of vocabulary, one native and one Chinese-originated (similar to English having parallel native Germanic and Latin/Greek for many words).
- English:

"**sweat**": from Proto-Germanic *swait* 

"perspire": from Latin *perspirare* 

("to breathe everywhere")

• Korean: "spoken language"

mal (말): from native Korean

eo (어): from Chinese 語 (Mandarin: yǔ)

#### Japanese, Korean, and Vietnamese

- **Kanji**, **Hanja**, and **Hán tự** are the Japanese, Korean, and Vietnamese pronunciations of 漢字 (*hànzì*), lit. "Chinese characters", and refer to Chinese characters used in those languages.
- Vietnamese gradually switched to the Latin alphabet in the early 20<sup>th</sup> century.
- Since the 1990s, Korean has gradually stopped using Chinese characters in newspapers and books in favor of the native Korean alphabet: hangul.
- Currently, most Japanese sentences use mixed script: kanji and native kana.

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#### Japanese Kanji

Kanji is used for nouns, stems of adjectives/verbs, and Japanese names. Kanji are **boldfaced in red** below.

経済学とは、この世において有限な資源から、いかに価値を生産 し分配していくかを研究する学問のことである

Economics is the study of the production and distribution of the world's finite resources.

経済学 economics生產production世world分配distribution有限limited研究research資源resources学問learning

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#### **Japanese Names and Places**

Characters	<b>English Meaning</b>	Chinese (Mandarin)	Japanese
鈴木	"bell wood"	ling mu	Suzuki
三菱	"three water chestnuts" san ling		Mitsubishi
東京	"eastern capital" dong jing		Tokyo
大阪	"large hillside"	da ban	Osaka
広島	"broad island"	guang dao	Hiroshima

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#### **East Asian Surnames**

• "Sameness" is determined by characters!

	English	Chinese Dialects					
Char.	Meaning	Mandarin (Standard)	Wu (Shanghai)	Yue (Cantonese)	Min (Taiwan)	Korean	Vietnamese
吳	(ancient Chinese state)	Wu	Ng	Ng	Go	Oh	Ngo
金	gold	Jin	Jin	Gam	Kim	Kim	Kim
陳	display	Chen	Sen	Chan	Tan	Jin	Tran

- Vietnamese is included because they have similar traditional naming traditions as Chinese and Koreans.
- Japanese is excluded for the opposite reason.

#### The Emulatability Myth

## "Chinese characters can be used as a common, universal writing system for all human languages."

- In the 17<sup>th</sup> century, European Enlightenment thinkers were fascinated with Chinese writing.
- Gottfried Leibniz (late 1666): Proposed a *characteristica universalis*: pictographic characters represent the most fundamental components of human thought for universal and precise communication.

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#### First Scholarly East-West Exchange

- Jesuit missionaries of the 16<sup>th</sup> and 17<sup>th</sup> centuries were the first Europeans to completely master the Chinese language and literature.
- Were inducted as members of the elite Chinese literati and advised Ming and Qing Dynasty emperors, especially on Western mathematics, astronomy, philosophy, and Christianity.
- Translated Euclid, Aristotle, and other classical European texts into Chinese; Confucius, Mencius and other classical Chinese texts into Latin.



Matteo Ricci (1552-1610)

#### **Intermission**

#### Please take a ten-minute break



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#### **How is Chinese Written?**



http://www.cuewb.com/files/images/chinese\_calligraphy\_class\_1.preview.jpg

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#### Vertical vs. Horizontal

- Traditionally: vertical, and right-to-left.
- Began to switch to Western-style order in the 19<sup>th</sup> and 20<sup>th</sup> centuries to accommodate mathematical formulas.

•	PRC officially switched i	n
	1956.	

 Taiwan, Hong Kong, and Macau gradually switched in 1990s.

9	5	1
10	6	2
11	7	3
12	8	4

1	2	3
4	5	6
7	8	9
10	11	12

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#### **Stroke Order**

- Every character has a particular order in which the components are written.
- Rules are quite logical (not arbitrary).
- These rules add structure which actually makes it easier to memorize characters, much like a long speech or piano piece is much easier to memorize than a short string of random words or music notes.

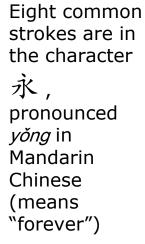


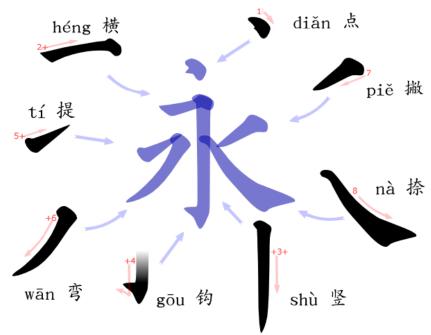
yán ("to speak") A common radical

Written as  $\vec{\iota}$  in Simplified Chinese

http://commons.wikimedia.org/wiki/Commons:Stroke\_Order\_Project Splash 2012 - Chinese Writing - S.M. Hou

#### **Eight Principles of Yong**





http://en.wikipedia.org/wiki/Eight\_Principles\_of\_Yong

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#### **Tally Marks**

Europe and Englishspeaking countries

Latin America



#### **Tally Marks**

Europe and Englishspeaking countries

Latin America

China, Japan, Korea



正 (Mandarin: zhèng) is a five-stroked character that means "correct", "proper", "honesty"

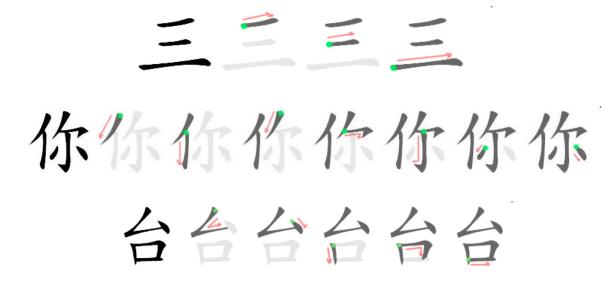
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#### **Basic Principles of Stroke Order**

• Top to bottom, left to right.



http://commons.wikimedia.org/wiki/Commons:Stroke\_Order\_Project Splash 2012 - Chinese Writing - S.M. Hou

#### **Basic Principles of Stroke Order**

Right-angle crosses:
 Horizontal before vertical.



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http://commons.wikimedia.org/wiki/Commons:Stroke\_Order\_Project Splash 2012 - Chinese Writing - S.M. Hou

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#### **Basic Principles of Stroke Order**

 Vertically (semi-)symmetrical characters: Center first, then other strokes.



#### **Basic Principles of Stroke Order**

 Rectangles: Left vertical, then top and right vertical as one stroke, then bottom (three strokes total).



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http://commons.wikimedia.org/wiki/Commons:Stroke\_Order\_Project Splash 2012 - Chinese Writing - S.M. Hou

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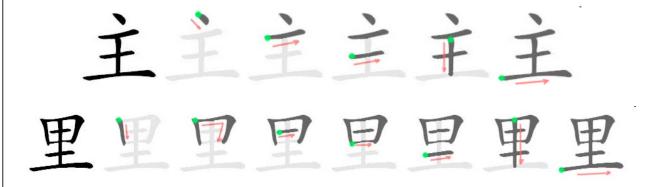
#### **Basic Principles of Stroke Order**

• Enclosures: First, the enclosure EXCEPT bottom stroke, then contents, then finish with the bottom stroke.



#### **Basic Principles of Stroke Order**

 Bottom horizontal stroke last: When a vertical stroke touches (but does not cross) a bottom horizontal stroke, that bottom stroke is last.

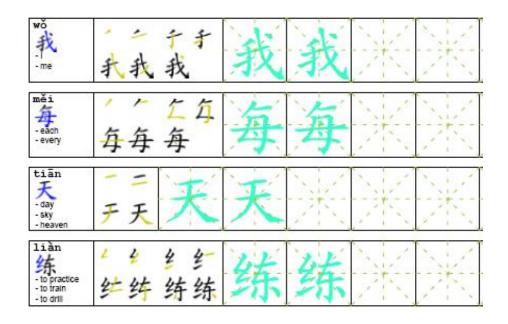


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#### **How to Practice Writing**



http://www.archchinese.com/write\_chinese.jpg

#### **Try Writing Chinese!**

- 1. Start by tracing the shadowed characters.
- 2. Write the characters freehand in the following blank spaces.
- 3. Write full expressions or sentences on blank Chinese writing paper.





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#### **Traditional vs. Simplified Script**

籲→吁

廳→厅

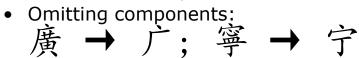
韆 → 千

讓 → 让

纔 → 才

## **Traditional vs. Simplified Script**

- Simplified:
  - Mainland China (1955 onwards)
  - Singapore (1969 onwards, synchronized with PRC in 1986)
  - Malaysia (1981 onwards)
- Traditional: Taiwan, Hong Kong, and Macau
- Overseas communities use whichever script is prevalent in their native region
- Replacing complicated components with simpler shapes:
  - 對 → 对; 觀 → 观



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# **Traditional vs. Simplified Script**

- Inspiration from cursive calligraphy:
  - 書 → 书: 馬 → 马
- Merging a character into another one with same sound:
  - 榖 → 谷; 後 → 后
- Systematically simplifying components:
  - 門 → 门: 閉 → 闭; 問 → 问 認識 → 认识
- Chinese as a foreign language in the USA is usually taught in simplified.

# **Japanese Simplified Characters**

- Separately from China, Japan simplified kanji in 1946 (新字体; Japanese: shinjitai; Mandarin: xinziti).
- Not as extensive as Chinese simplification.
- Most famous shinjitai character (to foreigners):



Do you recognize it?

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# Simplification: Chinese vs. Japanese

Where Simplified Traditiona		Chinese Simplified	Japanese Simplified	English	
Not Simp.	日	日日日		sun, day	
Both same way	學	学	学	to learn	
Both, but differently	置	图	図	picture	
Ch., not J.	電	电	電	electricity	
J., not Ch.	佛	佛	仏	Buddha	

# Problems with Simplified: Lost Pictographs

• Trad: 单 Simp: 车

• Meaning: Ancient: "chariot"

Modern: "automobile"

Pictograph: A rectangular box with

two axels

Mandarin: chē
 Cantonese: ce1

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# Problems with Simplified: Lost Semantics

• Trad: 爱 Simp: 发

• Meaning: "Love"

• Simplified removed the component is from the center, which means "heart". How can the character for "love" be missing a "heart"?

Mandarin: àiCantonese: oi3

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# Problems with Simplified: Look-Alikes

English:	"without"	"sky", "Heaven", "day"		
Trad:	無	天		
Simp:	无	天		
Mandarin:	wú	tiān		
Cantonese:	mou4	tin1		

They look completely different in Traditional, but look very similar in Simplified, especially if written quickly by hand.

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# **Chinese and Computing**



http://news.google.com.tw on Tuesday, January 26, 2010

### **Entry Systems**

- Four basic types: pronunciation, character structure, virtual handwriting, direct encoding
- Provides commonly associated characters when a character is typed. For example typing 日 (sun, day) produces the choices: 本,報,出,etc.(日本 = Japan,日報 = daily paper,日出 = sunrise, etc.)
- Displays character choices ranked by frequency; adjusts according to user.

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# **Zhuyin**

- Zhuyin Fuhao (Mandarin Phonetic Symbols) was invented in 1913 to teach Standard Mandarin pronunciation to schoolchildren. Abolished by PRC in 1949; still used in Taiwan.
- 37 symbols (21 consonants, 16 vowels) and 4 tone marks.
- Also known by first four characters: クタロロ ("b", "p", "m", "f").

# **Zhuyin**

月世落蒙烏×啼苎霜菜滿亞天蓋,

江景楓是漁山火氣對系愁氣眠景。

姑《蘇文城心外杀寒云山昌寺公》

夜上半岛鐘光聲了到公客至船影。

http://encalibur.com/learnchinese/graphics/poem\_phonic.gif

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## **Romanization**

- Idea: Write Chinese using Latin letters.
- Advantages:
  - Helps foreigners learn Chinese.
  - Standardizes transliteration of Chinese names into Western languages.
- Disadvantages:
  - Latin letters not "made" for Chinese.
  - Inaccurate if not fully understood.
- Systems:
  - Hanyu Pinyin, Tongyong Pinyin, Wade-Giles, Yale, Gwoyeu Romatzyh
- Keep in mind that pinyin was invented to represent Mandarin sounds, not the other way around.

### **Sound-Based Entry Systems**

- General Procedure:
  - Enter the sound of the character
    - Zhuyin Mandarin Phonetic Alphabet (注音符號)
    - Hanyu Pinyin A Romanization of Mandarin
    - Dialectal pronunciation
  - Choose among characters with the same sound.
- Features may include:
  - May require tones (帶調).
  - May allow multiple characters to be entered together as a phrase, sometimes with initials only. For example:
    - "sgyy" produces 三國演義 (San Guo Yan Yi; English: Romance of Three Kingdoms)
    - "wshm" produces 為什麼 (Wei She Me; English: why).

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## **Zhuyin Entry System**

- "Alphabetical" order from upper left downwards, then to the right, i.e. 1-Q-A-Z-2-W-S-X-etc.
- Used only in Taiwan.



## **Structure-Based Entry Systems**

- General Procedure:
  - Break up the character into parts (fixed order).
  - Each key on the keyboard corresponds to a character fragment.
  - Choose among characters with similar structure.
- Uses, on average, fewer keystrokes than sound-based entry systems.

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# Cangjie (倉頡)

- Cangjie (倉頡) is the first Chinese input system (invented in 1976 in Taiwan).
- Requires memorizing key locations of graphical units:

命 = 人一口中 = 
$$OMRL$$



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# Boshiamy (嘸蝦米)

- Boshiamy (嘸蝦米) is a novel Chinese input often used by college students in Taiwan
- The name is the Taiwanese phrase: "it's nothing!"
- Graphical components "look like" Latin letters.

 Can be fast: Some have achieved 200 characters per min.

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# Cangjie (倉頡) and Boshiamy (嘸蝦米)

Cangjie	<b>嘸</b> 蝦米		
命 = 人一口中 = OMRL 哈 = 口人一口 = ROMR 州 = 戈中戈中 = ILIL 吃 = 口人弓 = RON	命= 本口 p=AOP 哈=口 A D=OAO 州=リ リー Y Y Y 吃= リー Z=OV Z 尋= コー エコー T = E I OA 哥=丁 ロー T ロー T O T O 阿= ト コー		

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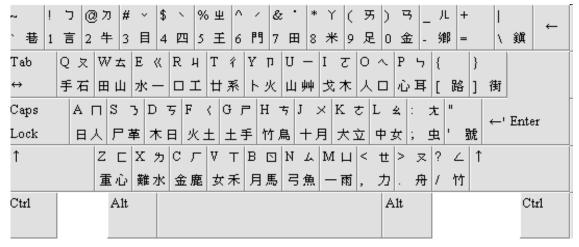
## **Keyboard Layout in Taiwan**

• Upper left: Usual QWERTY Latin letters

• Upper right: Zhuyin phonetic symbols

Lower left: Cangjie symbols

Lower right: Dayi symbols



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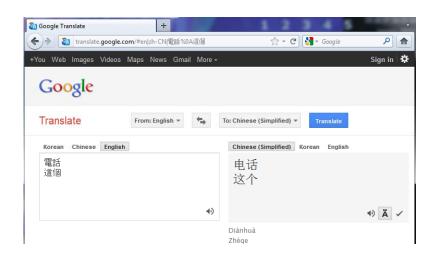
# **Virtual Handwriting**

- Available on most touch screen devices (iPhone, iPod touch, etc)
- Requires correct stroke order, but exact placement may not be necessary ("sloppy" writing may be OK)
- May even recognize cursive writing
- Able to write simplified but with traditional appearing (or vice versa)



# **Google Translate**

Good for converting traditional to simplified (or vice versa) and for getting Mandarin pronunciation of any character



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### Mozilla Firefox Add-On

- Perapera-Kun
- Available for Chinese, Japanese, Korean
- When mouse cursor is placed over text, a pop-up automatically translates it into English
- Recognizes famous names, places, etc.



# **Chinese Sign Language**

Some signs are based on characters!

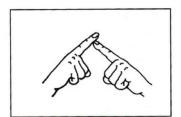
- 人 ("person")
- 干 ("dry")

More complex characters:

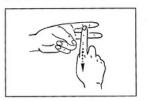
柏 ("cyprus tree") =
 木 ("tree" radical) +
 白 ("white" phonetic)

**Right hand:** waving (like tree with waving branches)

**Left hand:** points at teeth (white)



人 rén 双手食指搭成"人"字形。



干 gān 一手食指与另一手食、中指搭成"干"字形, 并向下稍拉。

Although sign languages aren't necessarily based on the dominant language of the country (i.e. American SL and British SL are not mutually intelligible), some features are retained: Elder brother (哥哥) and younger brother (弟弟) are completely different words in Chinese, so they are also different in Chinese Sign Language.

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### Is Chinese Difficult to Learn?

- Difficult aspects
  - Writing requires knowledge of characters
  - Tones
  - Mandarin has many unfamiliar sounds
- Both difficult and easy
  - Chinese is a contextual language
- Easy aspects
  - Relatively small base vocabulary
  - Straightforward grammar
  - No verb conjugation
  - No cases (like English; unlike Latin)
  - No plurals (except for pronouns)
  - No genders (except for written pronouns)
  - No honorifics (except in very formal writing)

### Is Chinese Difficult to Learn?

#### Pronunciation

- Short-term: Difficult (Tones and unfamiliar sounds)
- Long-term: Easy (Pinyin is pronounced exactly as the rules state; no strange spelling or stress rules like the English "PHO-to-graph" vs. "pho-TO-graph-y" vs. "pho-to-GRAPH-ic")

### Vocabulary

- Short-term: Difficult (almost all words are completely different from those of European languages)
- Long-term: Easy (small base vocabulary, complex words are built from basic ones)

#### Grammar

- Short-term: Easy Long-term: Easy

Writing

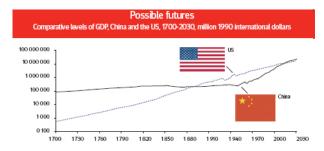
Short-term: Difficult - Long-term: Difficult

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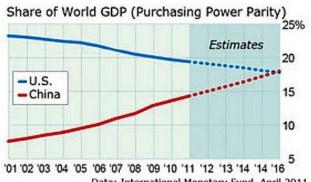
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# **How Valuable Is Knowing Chinese?**



http://topforeignstocks.com/wp-content/uploads/2010/03/us-china-gdp-



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Data: International Monetary Fund, April 2011

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# Why Characters Still Exist (and Will Likely Never Go Away)

- Practical
- Cultural

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# Why Characters Still Exist (and Will Likely Never Go Away)

- Practical
  - Phoneticization introduces ambiguity.
- Cultural

# Why Characters Still Exist (and Will Likely Never Go Away)

- Practical
  - Phoneticization introduces ambiguity.
  - Speakers of different dialects can understand one another's writing.
- Cultural

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# Why Characters Still Exist (and Will Likely Never Go Away)

- Practical
  - Phoneticization introduces ambiguity.
  - Speakers of different dialects can understand one another's writing.
- Cultural
  - Traditional emphasis on written communication over oral (compared to Western culture).

# Why Characters Still Exist (and Will Likely Never Go Away)

#### Practical

- Phoneticization introduces ambiguity.
- Speakers of different dialects can understand one another's writing.

#### Cultural

- Traditional emphasis on written communication over oral (compared to Western culture).
- "That's my name."

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# Why Characters Still Exist (and Will Likely Never Go Away)

### Practical

- Phoneticization introduces ambiguity.
- Speakers of different dialects can understand one another's writing.

### Cultural

- Traditional emphasis on written communication over oral (compared to Western culture).
- "That's my name."
- Bernhard Karlgren, a Swedish sinologist [1929]:
   "The day Chinese discard characters, they will surrender the very foundation of their culture."
- Characters tie together Chinese people across space and time.

# **Resources for Learning Chinese**

#### **General Information**



Daniel Kane: "The Chinese Language: Its History and Current Usage" (2006)



S. Robert Ramsey: "The Languages of China" (1989)



Jerry Norman: "Chinese" (1988)

#### **Textbooks**



Yuehua Liu: "Integrated Chinese" (2008)



Liu Xun et al: "New Practical Chinese Reader" (2003)



Julian Wheatley: "Learning Chinese: A Foundation Course in Mandarin" (2010)

www.bn.com & www.amazon.com

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# **Resources for Learning Chinese**

### **Dictionaries**



Liang Shih-Chiu, "Far East Chinese-English Dictionary" (1992)



Lonely Planet Mandarin Phrasebook (2010)

**Phrasebooks** 



Shou-hsin Teng, "Far East 3000 Chinese Character Dictionary" (2003)



Rick Harbaugh, "A Genealogy and Dictionary" (1998)

www.bn.com & www.amazon.com

# **Resources for Learning Chinese**

- Audio
  - Podcasts
  - Pimsleur language learning system (CDs)
- Online
  - http://en.wikibooks.org/wiki/Chinese
  - http://www.studypond.com/pinyin.aspx
  - http://www.zhongwen.com/
  - http://en.wiktionary.org/wiki/
  - http://commons.wikimedia.org/wiki/Commons:Strok e\_Order\_Project
  - http://translate.google.com/
  - http://strokeorder.learningweb.moe.edu.tw/home.do?rd=51

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### **Feedback**

- By the end of this weekend, these slides will be available online:
  - http://web.mit.edu/shou/Public/splash/
- I will send an e-mail to all of you asking for your feedback.
  - What did you think of this class?
  - What can be improved for next time?
- Contact me:

Stephen Hou stephenhou@alum.mit.edu

### **Extra Slides**

• After this slide are the extra slides that I couldn't fit into the presentation.

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# **Morpheme and Words**

- Morpheme: Smallest linguistic unit with semantic meaning
- Word with multiple morphemes:

unspeakable = un + speak +able

- Analytic/isolating language: words composed of a single morpheme
- Synthetic language: words composed of multiple morphemes

## **Synthetic European Languages**

• German:

Aufsichtsratsmitgliederversammlung

"On-view-council-with-link-plural-gathering", meaning "meeting of members of the supervisory board"

• Spanish:

escribiéndomelo

"write-ing-me-it(masculine/neuter)", meaning "(while or by) writing it to me"

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## **Efficiency of Language**

- "Chinese is a language that is among the most economical and least redundant in the use of overt grammatical devices." (F.Y. Xing, 1997)
- Example:

魚也吃了 (yú yě chī le)

Can be translated into English as either:

- "The fish also has/have eaten."
- "The fish also has/have been eaten."
- Use context to determine meaning!
  - Father asks child, "Has the dog eaten? How about the fish?" Child answers with the example.
  - Father asks child, "Did you eat the chicken? How about the fish?" Child answers with the example.

# **Writing Dialectal Speech**

Standard Written Chinese	請 please	給 give	我 me	他 he	的 (poss.)	書 book
Mandarin Pronunciation of Standard Writing	Qĭng	gěi	wŏ	tā	de	shū
Cantonese Pronunciation of Standard Writing	Chíng	kāp	ngóh	tā	dīk	syū
Written Colloquial Cantonese	晤該 please	畀 give	我 me	佢 he	本 (measure	書 ) book
Colloquial Cantonese Pronunciation	Mh gōi	béi	ngóh	kéuih	bún	syū

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### **Variation in Pronunciation**

	English Meaning	Chinese Dialects					
Char.		Mandarin (Standard)	Wu (Shanghai)	Yue (Cantonese)	Min (Taiwan)	Korean	Japanese
學	to learn	xue	0	hok	hak	hak	gaku
劍	sword	jian	ji	gim	kiam	geom	ken
無	lack, nothing	wu	me	mo	bo	mu	mu

Similar to the Arabic symbol "2" being pronounced "two", "dos", "deux", "zwei" in various languages, but having the same meaning in each.

# **Hanja Sample**

Korean in mixed hanja and hangul script

悠久한 歷史와 傳統에 빛나는 우리 大韓國民은 **3.1**運動으로 建立된 大韓民國臨時政府의 法統과...

Translated into traditional Chinese

擁有悠久歷史和光輝傳統的大韓民國,繼承以**3.1**運動建立起來的大韓民國臨 時政府法統...

Preamble to the Constitution of the Republic of Korea

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# **East Asian Currency Unit**

• The traditional character 園 is the unit of currency in East Asia. It is pronounced:

Mandarin Chinese: yuánJapanese: yenKorean: won

- In Japan and Mainland China simplified the character differently: 円;圆
- Mainland China, Taiwan, and Hong Kong use the informal character T
- Symbolically:

Japan, Mainland China: ¥Taiwan, Hong Kong: \$Korea (North & South): ₩

## **Incorrect Chinese Tattoos**



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### **The Most Famous Chinese Tattoo**

- Yue Fei (岳飛) (1103-1142), a Song (宋) Empire general who fought against the Jin (金) Empire.
- Had the following four characters tattooed across his back:



"Serve the nation with the utmost loyalty"



Statue of Yue Fei, from the Yue Fei Mausoleum in Hangzhou

http://en.wikipedia.org/wiki/Yue\_Fei

(Here, they are written left-to-right, but the actual tattoo is, of course, written right-to-left)

### **Serial Comma**

• Consider: "I ate with Jim, a captain, and a German."

It is unclear whether "a captain" is a description of Jim, or the second in a list of three people.

Now consider: "I ate with Jim, a captain and a German."

This time, it is unclear whether Jim is both a captain and a German.

Chinese doesn't have this problem!

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### **Chinese Commas**

• "Regular" comma (, )

在就任總統之前,肯尼迪擔任參議員。 Before assuming the presidency, Kennedy served as a senator.

Enumeration comma (、), dunhao (頓號)

我養狗、貓、魚、鳥。 I have dogs, cats, fish and birds.